Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) An electron emitter comprising:

a substance serving as an emitter made of a dielectric material, and a first electrode and a second electrode to which a drive voltage is applied to emit electrons;

said first electrode being formed on a first surface of the substance serving as the emitter;

said second electrode being formed on a second surface of the substance serving as the emitter;

at least said first electrode having a plurality of through regions through which said substance serving as the emitter is exposed, said first electrode having a surface which faces said substance serving as the emitter in peripheral portions of said through regions and which is spaced from said substance serving as the emitter.

2. (Previously Presented) An electron emitter according to claim 1, wherein at least said first surface of said substance serving as the emitter has surface irregularities due to the grain boundary of the dielectric material, said through regions of the first electrode are formed in regions corresponding to concavities of the surface irregularities due to the grain boundary of the dielectric material.

3. (Previously Presented) An electron emitter according to claim 1, wherein a maximum angle θ between said first

surface of said substance serving as the emitter and said surface of the first electrode which faces said substance serving as the emitter in peripheral portions of said through regions is in the range of $1° \leq \theta \leq 60°$.

4. (Previously Presented) An electron emitter according to claim 1, wherein a maximum distance d in the vertical direction between said first surface of said substance serving as the emitter and said surface of the first electrode which faces said substance serving as the emitter in peripheral portions of said through regions is in the range of $0\ \mu m < d \leq 10\ \mu m$.

5. (Previously Presented) An electron emitter according to claim 1, further comprising a floating electrode in regions of the first surface of said substance serving as the emitter which correspond to said through regions.

6. (Previously Presented) An electron emitter according to claim 1, wherein said through regions comprise holes.

7. (Previously Presented) An electron emitter according to claim 6, wherein said holes have an average diameter in the range from 0.1 μm to 10 μm.

8. (Previously Presented) An electron emitter according to claim 1, wherein said through regions comprise recesses.

9. (Previously Presented) An electron emitter according to claim 8, wherein said through regions comprise comb-toothed recesses.

10. (Previously Presented) An electron emitter according to claim 8, wherein said recesses have an average width in the range from 0.1 μm to 10 μm.

11. (Previously Presented ended) An electron emitter according to claim 1, wherein said through regions comprise slits.

12. (Previously Presented) An electron emitter according to claim 11, wherein said slits have an average width in the range from 0.1 μm to 10 μm.

13. (Previously Presented) An electron emitter comprising:

a substance serving as an emitter made of a dielectric material;

a first electrode having a bottom surface, only a portion of which is in contact with a first surface of the substance serving as the emitter;

a second electrode formed in contact with a second surface of the substance serving as the emitter; and

at least said first electrode having a plurality of through regions through which said substance serving as the emitter is exposed;

wherein said electron emitter has, in its electrical operation, between said first electrode and said second electrode:

a capacitor due to said substance serving as the emitter; and

a cluster of capacitors formed by said first electrode and said substance serving as the emitter in said through regions of said first electrode.

14. (Previously Presented) An electron emitter having an electron emission region, wherein the electron emitter changes to a first state in which an amount of positive charges and an amount of negative charges due to the accumulation of electrons caused by applying a negative voltage are in equilibrium with each other,

said electron emitter changes from said first state to a second state in which an amount of negative charges is greater than an amount of positive charges due to the accumulation of further electrons,

said electron emitter changes from said second state to a third state in which an amount of positive charges and an amount of negative charges due to the emission of electrons caused by applying a positive voltage are in equilibrium with each other,

said electron emitter changes from said third state to a state in which an amount of positive charges is greater than an amount of negative charges due to the emission of further electrons, and

said electron emission has characteristics represented by:

$$|V1| < |V2|$$

where V1 represents the voltage applied to the electron emitter to change to said first state and V2 represents the voltage applied to the electron emitter to change to said third state.

15. (Previously Presented) An electron emitter according to claim 14, wherein

$$1.5 \times |V1| < |V2|.$$

16. (Previously Presented) An electron emitter according to claim 14, wherein the rate of change of the amount of positive charges and the amount of electrons in the first state is represented by $\Delta Q1/\Delta V1$ and the rate of change of the amount of positive charges and the amount of electrons in the third state by $\Delta Q2/\Delta V2$, and the rates are related to each other by:

$$(\Delta Q1/\Delta V1) > (\Delta Q2/\Delta V2).$$

17. (Previously Presented) An electron emitter according to claim 14, wherein a voltage at which the accumulation of electrons is saturated is represented by V3 and a voltage at which the emission of electrons is started by V4, and the voltages are related to each other by:

$$1 \leq |V4|/|V3| \leq 1.5.$$

18. (Currently Amended) An electron emitter comprising:

a substance serving as an emitter made of a dielectric material, and a first electrode and a second electrode to which a drive voltage is applied to emit electrons;

wherein a first coercive voltage ~~V1~~ v1 is applied in one direction between said first electrode and said second electrode changes the electron emitter from a state in which said substance serving as the emitter is polarized in one direction to a state in which the polarization is inverted, and a second coercive voltage ~~V2~~ v2 is applied in another direction to change the polarization back in said one direction from said last-mentioned state, and the voltages are related to each other by:

$v1 < 0$ ~~or~~ and $v2$ [[<]]> 0, and

$|v1| < |v2|$.

19. (Previously Presented) An electron emitter according to claim 18, wherein

$1.5 \times |v1| < |v2|$.

20. (Previously Presented) An electron emitter according to claim 18, wherein a rate of change of the polarization when said first coercive voltage is applied is represented by $\Delta q1/\Delta v1$, and a rate of change of the polarization when said second coercive voltage is applied by $\Delta q2/\Delta v2$, and the rates are related to each other by:

$(\Delta q1/\Delta v1) > (\Delta q2/\Delta v2)$.

21. (Previously Presented) An electron emitter according to claim 18, wherein a voltage at which the accumulation of electrons is saturated is represented by v3 and a voltage at which the emission of electrons is started is represented by v4, and the voltages are related to each other by:

$1 \leq |v4|/|v3| \leq 1.5$.